

09/602,972

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(FILE 'HOME' ENTERED AT 13:39:19 ON 09 SEP 2002)

FILE 'CAPLUS, MEDLINE, EMBASE' ENTERED AT 13:39:49 ON 09 SEP 2002

L1 2890 S (HIDAKA,H? OR HIDAKA H?)/AU,IN
L2 23418 S (TANAKA, H? OR TANAKA H?)/AU,IN
L3 18 S L1 AND L2
L4 13 DUP REM L3 (5 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 13:43:03 ON 09 SEP 2002

L4 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 1999:197784 CAPLUS
DN 131:53647
TI Isolation of cDNAs encoding cellular drug-binding proteins using a novel expression cloning procedure: drug-western
AU Tanaka, Hideki; Ohshima, Nobuko; Hidaka, Hiroyoshi
CS Department of Pharmacology, Nagoya University School of Medicine, Nagoya, Japan
SO Molecular Pharmacology (1999), 55(2), 356-363
CODEN: MOPMA3; ISSN: 0026-895X
PB American Society for Pharmacology and Experimental Therapeutics
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 3, 15
AB A rapid and convenient new method for isolating the genes encoding cellular drug-binding proteins is described. This method, drug-western, is based on the use of the drug conjugated with a marker mol. as a probe for the screening of a cDNA library. Unlike the other methods, this method allows us to identify the genes for trace amts. of cellular drug-binding proteins without purifn. We have used this approach to isolate human cDNA clones encoding binding proteins for HMN-154 ((E)-4-[[2-(p-methoxy-benzene-sulfonamide) phenyl]ethenyl] pyridine), a novel benzenesulfonamide anticancer compd. (Kato and Hidaka, 1997). The proteins encoded by two of the isolated clones are identical to NF-YB, B subunit of nuclear transcription factor NF-Y, and thymosin .beta.-10, resp. Recombinants of both proteins bind specifically to HMN-154 in vitro. Comparison of amino acid sequence between these proteins showed the sequence similarity in a short amino acid stretch [K(X)AKXXXK]. Deletion or mutation of this region causes the significant loss of binding of both proteins to HMN-154. Furthermore, HMN-154 inhibits DNA binding of NF-Y to the human major histocompatibility complex class II human leukocyte antigen DRA Y-box sequence in a dose-dependent manner. Interestingly, other binding proteins identified by this method also possess the same or a similar motif. These results clearly demonstrate that NF-YB and thymosin .beta.-10 are specific cellular binding proteins to HMN-154. Hence, this new method is thought to be useful for the identification of drug-binding proteins.